

REMARKS

Claims 1-20 are pending. Claims 1-29 previously stood rejected pursuant to 35 U.S.C. § 112-first paragraph and 35 U.S.C. § 103 (a) in the Office Action mailed February 27, 2001 (the "Office Action"). By way of this amendment, Claims 1-20 have been canceled, and Claims 30-36 have been added. Applicant respectfully requests reconsideration or further examination pursuant to 37 C.F.R. § 1.115.

New Claims

New Claims 30-36 claim the operation of the invention more specifically with regards to identifying a disease influencing gene in a submitted biological specimen via targeted gene analysis methodologies in conjunction with the remote programmable apparatus's functioning as a receiver for scripted queries and as a transmitter of responses to scripted queries (Claim 30). The physiologic data includes measurements from blood glucose meters, respiratory flow meters, blood pressure cuffs, electronic weight scales, and pulse rate monitors (Claim 36).

The utilization of linkage analysis, positional cloning, functional cloning, and comparative gene expression and analysis as cited in Claim 32, together with the scripted queries features of Claim 30, provides the enabling and novel features of the instant invention. The preparation of cDNA constructs of isolated mRNA from the diseased and non-diseased populations for subsequent gene sequencing as detailed in Claim 33 more particularly provides enablement for the instant invention.

The important interplay that environmental and behavior factors exhibit in affecting the short and long term expression of disease influencing genes in both the diseased and non-diseased populations are addressed in Claims 34 and 35. In Claim 34, results from comparative gene analysis are combined with the continuously incoming data (responses and physiologic monitor measurements) via the remotely programmable apparatus from both population members. Gene sequence data of cDNA constructs from members of both populations are

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continuously compared with incoming environmental and behavior data. Positive and negative associations of environmental and behavioral factors with the disease and non-diseased populations are correlated to the cDNA sequences from members of each population.

By having the environmental data continually and over a long period of time analyzed with positional cloning results, various environmental and behavioral factors are identified in real time as possible triggers for the gene-influencing gene. As importantly, certain environmental and behavioral factors defined as associated with disease can be ruled out as non-genetic causes of disease. As the remotely programmable apparatus continues to collect and send data from members of both populations in current time, the advantages of the instant invention are realized. As the data is collected directly from members of both populations, changes in the statistical strength of association, or correlation, can be made in present time.

Moreover, establishing the potential of present time causality of disease influencing gene triggering is provided by the instant invention. Current time acquisition of phenotypic data (responses to queries and physiologic measurements) and its correlation with genotype data as provided by gene sequencing information affords a rapid determination of environmental and behavioral factor causality with gene triggering.

Similarly, in Claim 35, results from positional cloning analysis are combined with the continuously incoming data from the remotely programmable monitor. Positive and negative correlations are made for the factors with the results of positional cloning analysis for both populations. Factors that trigger or not trigger a disease-influencing gene can be ascertained with applications of the instant invention.

CONCLUSION

Pending Claims 30-36 establishes the utility, novelty, and non-obviousness of the instant invention over the cited prior art. Therefore, in consideration of the foregoing, the pending claims in the instant application are patentably distinct and Applicant requests that they be passed to allowance.

If the examiner has questions, the examiner is invited to contact the applicant's attorney listed below.

Respectfully submitted,

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EXPRESS MAIL CERTIFICATE

I hereby certify that this communication is being deposited with the United States Postal Service via Express Mail No. EL476256510US under 37 C.F.R. § 1.10 on the date indicated below addressed to: Commissioner for Patents, **BOX AMENDMENTS**, Washington D.C. 20231.

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